CLAIMS

What is claimed is:

1. A communication system for mobile platforms, comprising:

a mobile platform including a receiver subsystem (RS);

a satellite in communication with said RS;

a ground station including a transmitter subsystem (TS),

wherein said TS of said ground station transmits a forward link to said satellite and said mobile platform that includes Fixed Satellite Service (FSS) data in a first frequency band and Mobile Platform Satellite Service (MPSS) data in said first frequency band.

2. The communication system of claim 1 further comprising:

a mobile platform network connected to said first RS; and

user communication devices (UCD) connected to said mobile platform network.

3. The communication system of claim 1 wherein said first frequency band is the Ku frequency band between 10.7 and 15.0 GHz.

4. The communication system of claim 1 wherein said forward link lies between 11.7 and 12.2 GHz.

5. The communication system of claim 1 wherein said FSS and MPSS data employ Internet Protocol (IP) packets.

6. The communication system of claim 5 wherein said TS of said ground station employs IP packet-based compression.

7. The communication system of claim 5 wherein said TS of said ground station employs IP packet-based encryption.

8. The communication system of claim 5 wherein said TS of said ground station assigns one or more IP addresses to said FSS data on said forward link.

9. A communication system for mobile platforms, comprising:

a mobile platform including a transmitter subsystem (TS);

a satellite in communication with said TS;

a ground station including a receiver subsystem (RS),

wherein said TS of said mobile platform transmits a return link to said satellite and said ground station that includes Fixed Satellite Service (FSS) data in a second frequency band and Mobile Platform Satellite Service (MPSS) data in said second frequency band.

10. The communication system of claim 9 further comprising:

a mobile platform network connected to said TS; and

user communication devices (UCD) connected to said mobile platform network.

11. The communication system of claim 9 wherein said second frequency band is the Ku frequency band between 10.7 and 15.0 GHz.

12. The communication system of claim 9 wherein said return link is between 14.0 and 14.5 GHz.

13. The communication system of claim 9 wherein said TS of said mobile platform employs bulk compression on said FSS and MPSS data.

14. The communication system of claim 9 wherein TS of said mobile platform employs bulk encryption and padding on said FSS and MPSS data.

15. The communication system of claim 9 wherein said TS of said mobile platform applies multiple access coding to said FSS and MPSS data on said return link.

16. The communication system of claim 15 wherein said multiple access coding is selected from CDMA, FDMA, and TDMA.

17. A method of providing broadband communications for mobile platforms, comprising the steps of:

providing a mobile platform including a receiver subsystem (RS);

communicating with said satellite and said mobile platform using a ground station with a transmitter subsystem (TS); and

transmitting a forward link to said satellite and said mobile platform using said TS of said ground station, wherein said forward link includes Fixed Satellite Service (FSS) data in a first frequency band and Mobile Platform Satellite Service (MPSS) data in said first frequency band.

18. The method of claim 17 further comprising the steps of:

connecting a mobile platform network to said RS; and

connecting user communication devices (UCD) to said mobile platform network.

19. The method of claim 17 wherein said first frequency band is the Ku frequency band between 10.7 and 15.0 GHz.

20. The method of claim 17 wherein said forward link is between 11.7 and 12.2 GHz.

21. The method of claim 17 further comprising the step of:

framing said FSS and MPSS data as Internet Protocol (IP) packets.

22. The method of claim 21 further comprising the step of:

compressing said IP packets.

23. The method of claim 21 further comprising the step of:

encrypting said IP packets.

24. The method of claim 21 further comprising the step of:

assigning one or more IP addresses to said FSS data on said forward link.

25. A method for providing broadband communications for mobile platforms, comprising the steps of:

providing a mobile platform including a transmitter subsystem (TS);

communicating with said satellite and said mobile platform using a ground station with a receiver subsystem (RS),

transmitting a return link to said satellite and said ground station using said TS of said mobile platform, wherein said return link includes Fixed Satellite Service (FSS) data in a second frequency band and Mobile Platform Satellite Service (MPSS) data in said second frequency band.

26. The method of claim 25 further comprising the steps of:

connecting a mobile platform network to said TS; and

connecting user communication devices (UCD) to said mobile platform network.

27. The method of claim 25 wherein said second frequency band is the Ku frequency band between 10.7 and 15.0 GHz.

28. The method of claim 25 wherein said return link is between 14.0 and 14.5 GHz.

29. The method of claim 25 further comprising the step of:

bulk compressing said FSS and MPSS data.

30. The method of claim 25 further comprising the step of:

bulk encrypting said FSS and MPSS data.

31. The method of claim 25 further comprising the step of:

applying multiple access coding to said FSS data on said return link.

32. The method of claim 25 wherein said multiple access coding is selected from CDMA, FDMA and TDMA.